

Telephone: Idmiston 391

Our Ref: MRE/3516/6/RES/JG

Your Ref:



MINISTRY OF SUPPLY,
MICROBIOLOGICAL
RESEARCH ~~DEPARTMENT~~
ESTABLISHMENT,
EXPERIMENTAL STATION,
PORTON,
NEAR SALISBURY,
WILTS.

BY AIR MAIL

6th November, 1956.

Dear Professor Lederberg,

Thank you for your letter and very interesting abstract. The possible connection between the compounds described by Park and the synthesis of cell walls is fascinating. May I emphasise that the identification of the amino sugar as 3-O- α -carboxyethyl-hexosamine needs confirmation and it is hoped that synthesis of a substance with this structure will be achieved (eventually) by Major L. Kent of this Establishment. I am attracted to your suggestion of "phragmose" and at the moment it competes with "muramic acid" and "chlainaic acid" which have also been suggested as trivial names.

Our work on bacterial walls has been concerned with the activity of a lytic enzyme found in certain spores and this work is confined to Bacillus species. I have made no investigations with E. coli and I am unable to suggest other components relevant to your mutant hunt. However, both "phragmose" and DAP are easily identified and would appear to be suitable substances to start with.

There should be no difficulty with regard to a suitable

/source of

Professor J. Lederberg,
Department of Genetics,
University of Wisconsin,
Agricultural Hall,
Madison 6,
Wisconsin, U.S.A.

YK 30

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NOTRC

101

5mg. "phragmose"

21

101

source of "phragmose" since it is so widely distributed. Our usual source is B. megatherium spores which are relatively rich in the substance. The method of isolation is simple but lengthy and should you require it, please let me know. I have enclosed a small amount of fairly pure substance (2 x crystallized) which should be suitable for identification purposes.

DAP is supplied by the following firms.

1. Mann Research Laboratories, 136 Liberty Street, New York, 6 N.Y.
2. L. Light & Co. Ltd., Poyle Trading Estate, Colnbrook, Bucks, England.

The commercial material is a mixture of the DD, LL and Meso isomers.

With regard to reprints of our restricted work on bacterial cell walls, so far an abstract of a communication has been published (1956, J. gen. Microbiol, 15, xii) of which no reprints are available. The paper will be published early next year. It appears unlikely that you require reprints of our work on spores but if you do, please let me know.

Mrs. Joan Powell sends you her regards.

Yours sincerely,

(R. E. STRANGE).

* It is advisable to check the purity of commercial DAP.